Name:

p1106: Solve by factoring (v6)

1. Solve the equation

$$x^2 + 11x + 24 = 0$$

$$(x + 8)(x + 3) = 0$$
$$x = -3$$
$$x = -8$$

2. Solve the equation

$$x^2 - 5x - 24 = 0$$

$$(x + 3)(x - 8) = 0$$
$$x = 8$$
$$x = -3$$

3. Solve the equation

$$6x^2 + 7x - 6 \;=\; 5x^2 + 7x - 2$$

$$x^2 - 4 = 0$$
$$(x + 2)(x - 2) = 0$$
$$x = 2$$
$$x = -2$$

4. Solve the equation

$$6x^2 - 1 \;=\; 5x^2 - 2x + 2$$

$$x^2 + 2x - 3 = 0$$
$$(x - 1)(x + 3) = 0$$
$$x = -3$$
$$x = 1$$

5. Solve the equation

$$3x^2 + 4x - 50 \;=\; 2x^2 + 3x + 6$$

$$x^2 + x - 56 = 0$$
$$(x + 8)(x - 7) = 0$$
$$x = 7$$
$$x = -8$$

6. Solve the equation

$$3x^2 - 8x - 16 = 0$$

$$(3x + 4)(x - 4) = 0$$
$$x = 4$$
$$x = \frac{-4}{3}$$

7. Solve the equation

$$11x^2 - 80x + 21 = 0$$

$$(11x - 3)(x - 7) = 0$$
$$x = 7$$
$$x = \frac{3}{11}$$

8. Solve the equation

$$8x^2 + 30x + 12 \;=\; 3x^2 + 8x + 4$$

$$5x^2 + 22x + 8 = 0$$
$$(5x + 2)(x + 4) = 0$$
$$x = -4$$
$$x = \frac{-2}{5}$$

9. Solve the equation

$$13x^2 - 91x + 43 \;=\; 2x^2 - 9x + 8$$

$$11x^2 - 82x + 35 = 0$$
$$(11x - 5)(x - 7) = 0$$
$$x = 7$$
$$x = \frac{5}{11}$$

10. Solve the equation

$$7x^2 - 10x - 14 \;=\; 2x^2 + 2x - 5$$

$$5x^2 - 12x - 9 = 0$$
$$(5x + 3)(x - 3) = 0$$
$$x = 3$$
$$x = \frac{-3}{5}$$